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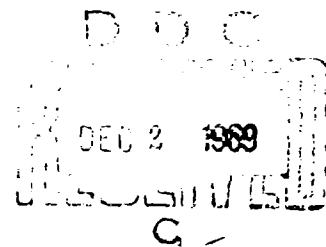
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ANNUAL HISTORICAL SUMMARY DEFENSE DOCUMENTATION CENTER

1 JULY 1968 TO 30 JUNE 1969



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DEFENSE SUPPLY AGENCY
DEFENSE DOCUMENTATION CENTER
CAMERON STATION
ALEXANDRIA, VIRGINIA 22314

31 October 1969

FOREWORD

This summary describes the more significant activities and achievements of the Defense Documentation Center during Fiscal Year 1969 (1 July 1968 through 30 June 1969).

Robert B. Stegmaier Jr.
ROBERT B. STEGMAIER, JR.
Administrator

KEY PERSONNEL
DEFENSE DOCUMENTATION CENTER

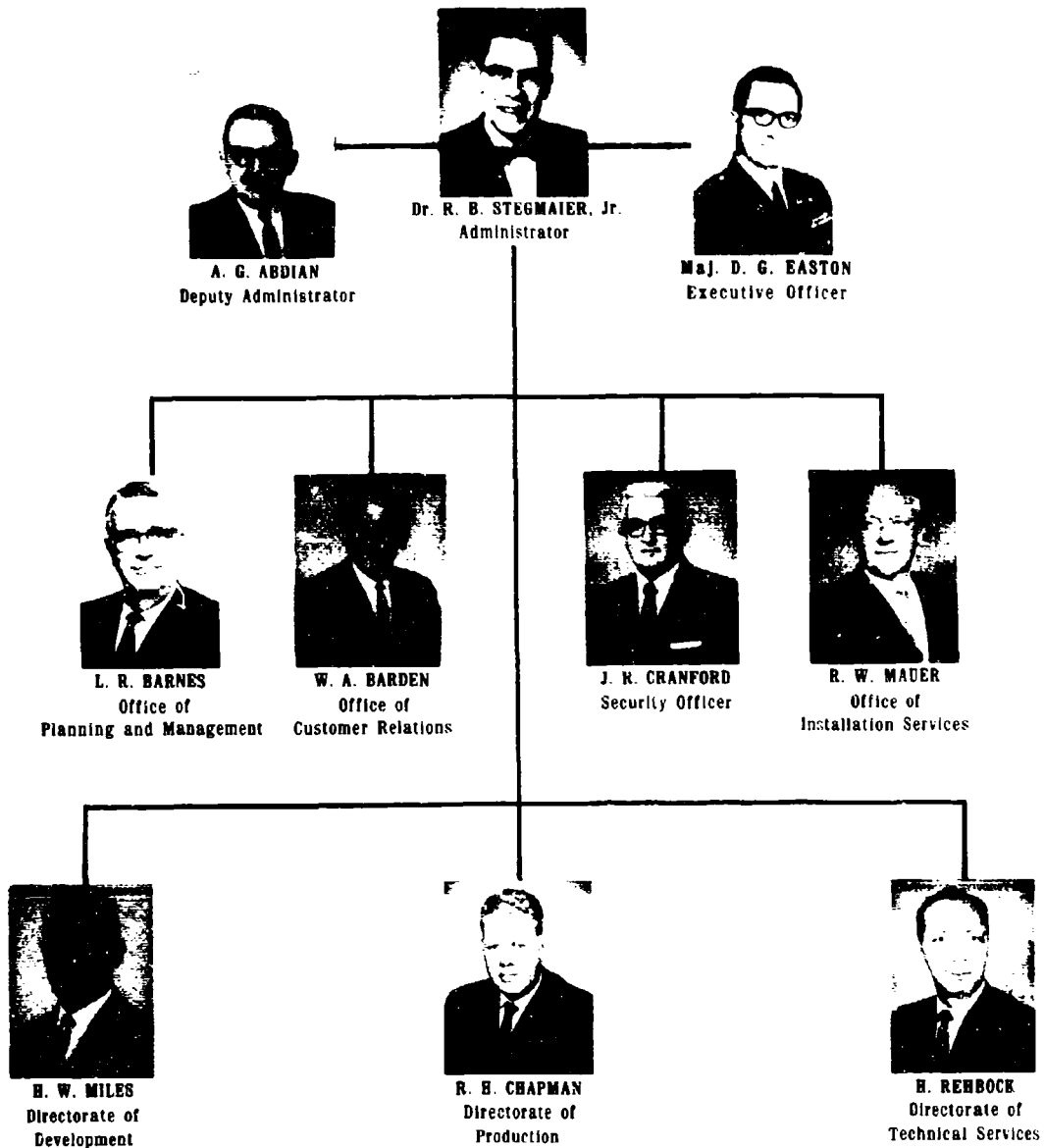
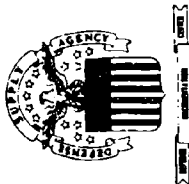


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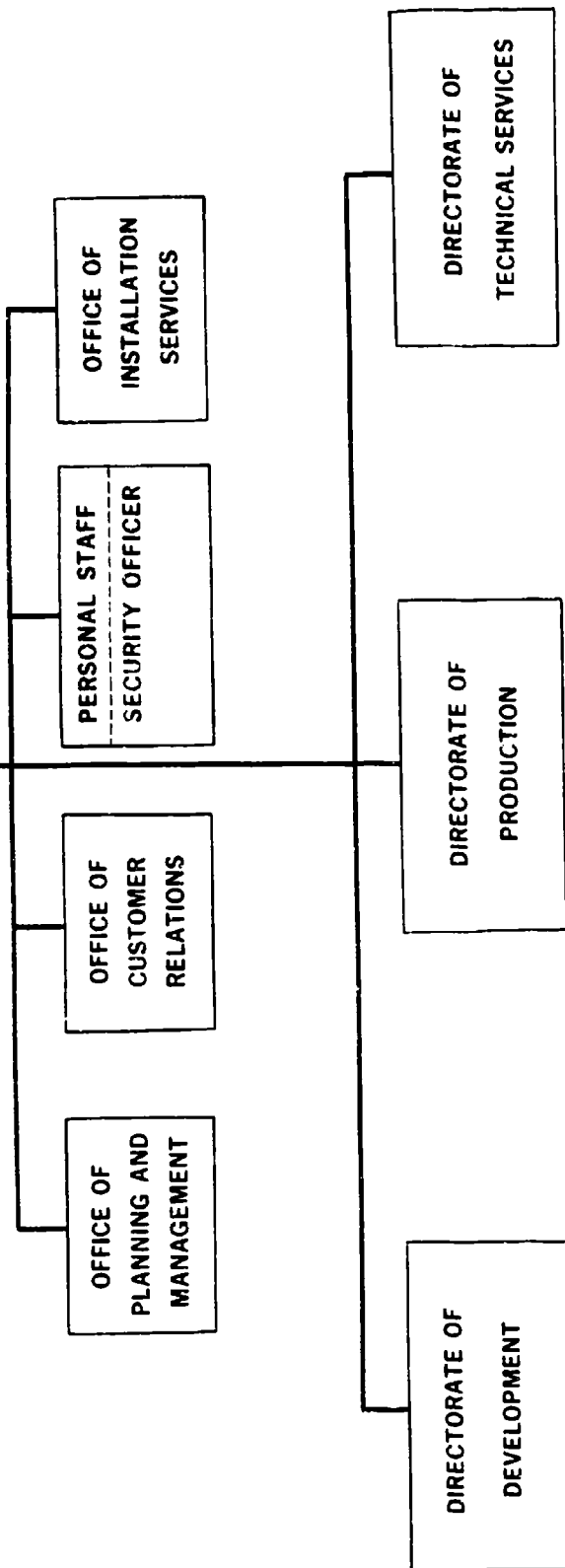
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DEFENSE SUPPLY AGENCY
DEFENSE DOCUMENTATION CENTER



ADMINISTRATOR
DEPUTY ADMINISTRATOR
EXECUTIVE OFFICER



Approved by: *[Signature]*
ROBERT D. STEWART, JR.
Administrator
Date: 2 June 1969
Prepared by: Office of Planning and Management

I. DDC AND THE SCIENTIFIC AND TECHNICAL COMMUNITY

The pace of information and document technology continued to accelerate during Fiscal Year 1969. The Defense Documentation Center's role in the Scientific and Technical Information (S&TI) program of the Department of Defense (DoD) increased in substance, importance, and variety. Within the past several years many new tools and techniques have been developed and made available. Their potential applications and the associated system implications are wide-ranging and complex.

Within this environment of technological change, DDC's functions, products, and services have expanded even further from the traditional concept of an archival repository and a library-oriented operation. As evidence of this, about 25 percent of DDC's total effort for the past two years was programmed in support of work unrelated to the original mission of secondary distribution of DoD technical reports. This ratio is expected to increase during FY 1970 and beyond.

More significant indications of DDC's contribution to the scientific and technical community are the ever-increasing workloads and the complex mix of DDC assets, products, and services. Workloads in nearly all major work processes were up in FY 1969 from FY 1968. Workloads concerned with the R&T Work Unit Information System, one of the newer missions, reflected greater increases from last fiscal year than workloads in other areas. Additional workloads are generated continually through the mission assignment to DDC of new requirements developing within the DoD and other Federal agencies complex. The mix of services offered S&TI users has expanded significantly from the furnishing of hard copy documents to a full range of products and formats tailored to users' needs. In short, DDC assists the S&TI community in determining its requirements and develops the necessary techniques, systems, and procedures for fulfilling them either on a collective or individual basis.

Interactions with non-DoD members of the Federal S&TI community continued throughout the year. These included areas of joint effort with the National Aeronautics and Space Administration (NASA), the National Science Foundation, and the Department of Commerce; specialized services to the Interdepartmental Committees for Atmospheric Sciences and Applied Meteorological Research; and increased representation on the panels and working groups of the Committee on Scientific and Technical Information of the Federal Council for Science and Technology. Some of the specific efforts in which DDC is a major participant are:

- a. Reciprocal user services with NASA and the Atomic Energy Commission.
- b. Documentation and management information services to in-house and contractual research efforts of other Federal agencies.

c. A cooperative procedure with NASA to eliminate duplicate processing. NASA uses DDC-prepared magnetic tapes as input data for DoD-sponsored documents relevant to aerospace interests.

d. Release to the public (through the Clearinghouse for Federal Scientific and Technical Information, Department of Commerce) of unclassified and unlimited technical reports and announcement data describing them.

e. A cooperative program between DoD and NASA for exchanging computer documentation and programs through coordinated efforts with the University of Georgia Computer Software Management Information Center.

During FY 1969, DDC made major steps forward in its internal operations in order to keep abreast of demands in the S&TI world. They included:

a. Numerous revisions and enhancements to current document distribution and information processing systems.

b. Installation and operation of advanced computer equipment and related software.

c. Major accomplishments toward a FY 1971 attainment of an experimental on-line system which will provide direct access to DDC data banks.

d. Significant improvements in the Work Unit Information System.

e. Outlining of development plans to identify and develop products, services, and systems for future needs.

II. HIGHLIGHTS OF DDC MISSION RESPONSIBILITIES

The Defense Documentation Center (DDC) supports Defense-related research, development, test, and evaluation (RDT&E) activities by helping them determine what has been done and what is being done in Defense RDT&E.

DDC is the central facility of the Department of Defense for the secondary distribution of technical reports generated by Defense-funded efforts. The Center also operates computer-based data banks of management and technical information, and is responsible for the development of Scientific and Technical Information (S&TI) storage, retrieval, and dissemination systems. Services are available to Defense and other Federal activities, and to their contractors, subcontractors, and grantees.

Under the operational control of the Director, Defense Supply Agency, with policy direction from the Director of Defense Research and Engineering (DDR&E), the basic DDC mission consists of two major programs within the DoD S&TI Program. First, an Operational Program devoted to the operation, maintenance, and improvement of existing techniques, processes, and systems to provide approved and announced S&TI products and services for the interchange of technical information within DoD, and between DoD and other U. S. Government and authorized non-Government agencies. Second, a Development Program which provides major advances in terms of new and significantly improved S&TI products and services and the identification and removal of technical barriers in S&TI transfer.

The Center operates the DoD central bank of management and technical information concerning Defense-sponsored research and development efforts currently in progress. The basic purpose of the automated Research and Technology Work Unit Information System is to help determine quickly who is doing what research, where, and how. Access to the system is available to Federal agencies and DoD contractors and grantees.

DDC acquires technical reports on regular primary distribution or by individual acquisition from originators, processes and stores the reports (more than 920,000 titles are now in the collection), announces their availability for official use, and supplies copies. Organizations registered with DDC may obtain copies in either full size or microform. As a related function, DDC provides a bibliography service by producing, on request, listings and descriptions of technical reports on hand, old and new, relating to particular subject areas.

The Development Program is concerned especially with customer requirements; the state of the art of technologies concerned with information storage, retrieval and transfer; and with cooperative interagency systems development for use in DDC and other DoD information activities.

Complete descriptions of any of the DDC products and services, and procedures for obtaining them, can be requested from the Office of Customer Relations, Defense Documentation Center, Cameron Station, Alexandria, Virginia 22314.

III. TECHNICAL REPORT SERVICES

Technical Report Input Workload

Technical report input to the DDC collection in FY 1969 was up 3% from FY 1968 to 47,393. The input consists of 1,470 unannounced reports and 45,923 reports that were announced in the DDC Technical Abstract Bulletin (TAB) or in the Department of Commerce U. S. Government Research and Development Reports (USGRDR) publication. Classified reports accounted for 17%, unclassified but limited for 43%, and unclassified and unlimited for 40% of the announced reports. Average processing time for announced reports was up one day from FY 1968 to 36 workdays between initial receipt of the report and its announcement in the published TAB or USGRDR. This increase is the combined net result of additional time required for processing the Confidential TAB and for printing the USGRDR.

Technical Report Output Workload

The total technical report output under the DDC secondary distribution mission for FY 1969 was 1,883,616. Of this total, 1,103,548 were furnished on demand (requests from users for specific reports). The remaining 780,068 were supplied through a selective dissemination process in which a controlled group participating in an experiment, and a limited number of Government agencies authorized automatic distribution were automatically provided with microform copies of new reports falling within their predetermined areas of scientific and technical interest.

About 1,592,700 or 85% of all reports distributed through secondary distribution during the fiscal year were in microform. Microfiche accounted for 96% and microfilm for 4% of the reports in microform.

Microfiche vs. "Hard Copy" Documentation

A trend toward increased use of microfiche as an improved medium for reproducing and using scientific and technical information gained momentum during FY 1969. About 323,000 or 18% of requests for technical reports during FY 1968 were filled with microfiche copies. This number increased to over 743,000 or 67% of the requests filled in FY 1969. An additional 780,000 reports in microfiche form were furnished during FY 1969 under the automatic selective dissemination program (described earlier under "Technical Report Output Workload"). DDC also continued to produce current copies of its announcement bulletin (TAB) and indexes in microfiche and make them available to users, and to place all new reports on microfiche for permanent storage.

The increased demand for microfiche necessitated rapid progress

within DDC in the area of microphotography, particularly in testing and refinement of microfiche producing equipment and techniques. Some of the more significant areas of interest were: testing and use of automatic high speed microfiche duplicating equipment; programs for improvement of microfiche quality and hard copy reproducibility; increased capability to measure and control film processing quality; modifications and conversion of equipment to increase efficiency and versatility; and longer range programs to obtain the latest and most modern microfiche handling equipment. Success in the improvement efforts enabled DDC not only to meet the demand for microfiche in FY 1969, but also to plan for FY 1970 in-house production of microfiche previously accomplished through commercial contract.

Increased user community interest in microfiche created an expanded need by the users for microfiche reader-printer, storage, retrieval, and related equipment. To assist in satisfying these needs, DDC launched several liaison-participant type programs with users and manufacturers to help determine and fulfill the user requirements. One such effort was the establishment at DDC of a display of representative samples of reader-printer equipment available. This display along with a user guide for equipment evaluation is furnished as another DDC service.

Bibliography Workload and Services

Requests for bibliographies completed in FY 1969 were 22,373, slightly more than for FY 1968. An average of 162 technical reports was cited in each bibliography, compared to an average of 132 last year. Processing time was down slightly from FY 1968 to 2.7 work-days.

Retrieval services were broadened this year by the release of information from the Research and Technology Work Unit Information System data bank to DoD contractors and grantees. Requests for this information have shown a marked rise in the last quarter of FY 1969. The demand for scientific and technical report bibliographies has also risen steadily since January 1969. Special requests, requiring priority handling, for bibliographies on subjects of significant and immediate interest also constituted a prime part of the DDC service. The range of requesters in this area spanned from Presidential and Congressional levels to overseas combat units.

In addition to providing information on request, DDC has an active program of publishing bibliographies on subjects of broader general interest and advertising their availability in published announcement media. Almost 100 technical subjects were covered during the year and an 8-volume bibliography of bibliographies was compiled. The subjects include: bioastronautics, computers,

medicine, microfiche, physics, space studies, undersea operations, warfare, weather, and others.

Announcement Media

The availability of new reports added to the DDC collection is announced in one of two basic publications, each issued twice-monthly and accompanied by basic indexes to the reports contained. Quarterly and annual cumulative indexes for both are also published.

A Confidential DDC Technical Abstract Bulletin (TAB) announces classified reports, and unclassified reports with certain categories of limitations on their release. Significant improvements in the publication process for TAB and TAB indexes were effected during FY 1969. Initiation of the use of a computer-based photo-composition technique for processing and preparing TAB and its indexes for printing eliminated many manual operations and resulted in a substantial reduction in publication costs.

The U. S. Government Research and Development Report (USGRDR), a Department of Commerce publication, is issued by the Clearinghouse for Federal Scientific and Technical Information (CFSTI). It covers for DDC the unclassified DoD reports with no release limitation.

All DoD reports announced in the USGRDR are processed, stored, and distributed by CFSTI for DDC in accordance with agreements between the Department of Commerce and the Department of Defense.

Copies of these announcement media plus other announcements relating to DDC reports, products and services are made available to DDC users based on the need, interest, and security clearance of the user.

DDC Service Charge

Under a new policy of the Department of Defense effective 1 July 1968, requests for full-size or "hard" copies of technical reports which are available in microfiche form became subject to a \$3.00 per copy service charge. However, DDC has continued to provide, at no cost to the user, microfiche and microfilm copies of reports, bibliographies, copies of report announcement media, and other products and services.

The Department of Commerce Clearinghouse for Federal Scientific and Technical Information (CFSTI) was established as agent for all financial arrangements and collections under the plan. This arrangement was made because of CFSTI's past experience with similar service charges and its mission as a point of release of information to the public. Payment of the charge to CFSTI is made either

by remittance with the request or charged to a prearranged deposit account.

As anticipated, the initiation of service charges in FY 1969 caused a change in the mix of the form of reports requested. Demand for hard copy, for which the service charge is made, declined while requests for microfiche copies which are provided without charge, increased substantially. This trend toward increased use of microfiche was caused not only by initiation of the service charge, but also by technological advances in the production, storage, and use of microfiche, and acceptance of these advances by the scientific and technical community.

Workload Transfer to the Department of Commerce

A gradual shift in documentation workload from DDC to the Clearinghouse for Federal Scientific & Technical Information (CFSTI), Department of Commerce began in 1964 when CFSTI started processing DoD sponsored unclassified and unlimited technical reports. In 1967 certain categories of unclassified and limited documents were also transferred for processing. During FY 1969 additional workloads previously accomplished by DDC were transferred to CFSTI. These included all unclassified and limited documents having "No Foreign" and "U. S. Government Only" distribution statements. The Clearinghouse now performs all processing, announcing, storage, reproduction, distribution, and other services related to unclassified and unlimited documents. It provides the same services for the documents having "No Foreign" and "U. S. Government Only" limitations, except that announcement of the documents and validation of requests are performed by DDC.

There are two underlying benefits derived from this shift of workload. The more "routine" unclassified DoD sponsored reports are now centralized along with many other scientific and technical documents and handled by the Clearinghouse, the basic mission of which is to provide unclassified information to the public. Additionally, savings in resources resulting in DDC are more effectively utilized in: control of classified and other more sensitive information; expanded ADP operations; and the ever-increasing DDC development missions.

IV. RESEARCH AND ENGINEERING MANAGEMENT INFORMATION SERVICES

Background

During the past few years the DDC mission has expanded rapidly to include the provision of a variety of complex management information services to the DoD RDT&E community. The major service in this area is the operation of the DoD Research and Technology Work Unit Information System (WUIS) and its data bank, first established by DDR&E in FY 1966. The WUIS provides a centralized source of information on current DoD-sponsored efforts in science and technology. Its goal is to make brief descriptions of these efforts available to all DoD scientists, engineers, and managers in formats that will meet their various needs in conducting similar work.

FY 1969 WUIS Highlights

The most significant impact on the WUIS was a DoD change in guidance regarding input to and manipulation of data for the system. This guidance directed all DoD components to revise their data collection and processing systems to effect improvement and uniformity in: data element definition and format; revision of data already in the data bank; and integration of information from other RDT&E Programs not previously included. A "milestone" schedule was also established by DoD for accomplishment of necessary action throughout FY 1969.

a. Based on the guidance, DDC published a new WUIS Data Input Manual. This manual was developed in coordination with the DoD components that contribute work unit summaries of which the data bank is comprised, and supplements DoD instructions. The manual established uniform procedures, codes, data elements, and formats for use in submitting the work unit data. It also established a working group with representatives from DDC and the DoD contributing components to insure consistency in WUIS input and to provide a vehicle for altering the system and its contributor subsystems as necessary to improve responsiveness.

b. DDC conversion of the WUIS direct file to the new data elements and formats was also completed in December 1968, and the initial contributor input in the new format was processed in January 1969.

c. Significant progress was made during FY 1969 by DoD components involved in meeting the milestone schedules. However, because of the complexity of the voluminous tasks necessary and unforeseen problems encountered, some slippage did occur. In May 1969, DDC reported a detailed status of the schedule accomplishment to HQ DSA along with recommendations for actions to complete

the schedule. At the close of the year, DDC personnel were in almost daily contact with their counterparts in other DoD components in an effort to solve the remaining problems.

Prior to FY 1969, reports generated from the WUIS data bank were available only to U. S. Government components. Beginning 1 July 1968, the DDR&E authorized DDC to provide this service to DoD contractors and grantees. A R&T Work Unit Information System Contractor Access Manual describing the services available to contractors from the system and procedures for obtaining these services, was published in January 1969. Interest expressed by this new group of users is evidenced by the fact that almost 25% of requests for WUIS data during FY 1969 came from this group.

Implementation of a DDC designed Research and Engineering Generalized Input Subsystem (REGIS) as the mechanism by which DDC internally processes data in the WUIS was completed in the third quarter of FY 1969. REGIS emphasizes edit/audit and update processes, and the feedback documents furnished contributors. It is expected to optimize procedures for processing data, correcting and maintaining WUIS files, and producing high-quality output products.

DDC implemented an automated WUIS Request Validation and Release Control Procedure on 1 November 1968. This system validates requester's "need-to-know," security clearance, and other pertinent data against the release requirements of work units selected by the computer search system. It also produces reject notices and creates mailing labels.

One of the principal programs directly connected with the WUIS is a Recurring Reports System. This program provides the user a brief bibliographic type listing of work units that fall within his areas of interest. During the past year the program was reevaluated and updated. The users were asked for feedback information expressing their current subjects of interest and the timing of the recurring reports which would best meet their needs. As a result, reports were revised and rescheduled to eliminate peak workloads at DDC and at the same time to provide needed service to the users on a timely basis in accordance with their individual requirements.

In addition to the regular requests for WUIS data processed through routine channels, DDC received and completed within 24 hours many Congressional inquiries and high priority special requests from ODDR&E. The ability to respond to requests of this nature in a timely manner more than proves the value of a generalized parameter driven format generator which was used throughout the year. One year ago such reports would have required a minimum of five to seven days with an average response of ten to fourteen days.

WJIS Input and Output

On 30 June 1969 there were 43,780 work units in the DDC data bank of which 37,216 were DoD records and 6,564 were NASA records. Active DoD records in the file were 21,136 and the percentage distribution as to source of input was: Navy - 34%, Army - 30%, Air Force - 27%, and other DoD elements - 9%.

In FY 1969, DDC filled 5,820 requests for work unit information. Twenty-three percent of the requests were completed in the 1498M formats (a machine printed image of information as it is entered into the data bank); 72% in RFG-produced formats (formats which produce selected information field printouts from the data bank and arrange them as requested); and 5% in new formats (formats requiring special tailoring to satisfy specific requirements). An average of 5.5 workdays was required to process requests for information in 1498M formats, 4.6 workdays for those in RFG-produced formats, and 16.0 workdays for those requiring new formats.

Other Data Banks and Services

A number of additional Management Information Services are provided by DDC as a part of, or in conjunction with, the Work Unit Data Bank. They include:

a. DoD Studies and Analyses Data Bank. DoD established procedures for the control of all DoD studies and analyses performed under contract or grant for any component of DoD and from all appropriations. The six defined categories include manpower and personnel, concepts and plans, operations and force structure, logistics, science and technology, and management. The procedures provided for establishment of a DoD Studies and Analyses Data Bank within DDC. At the close of FY 1969, DDC continued work with other DoD components toward finalization of detailed requirements, programs, and procedures for operation of the data bank.

b. Referral Data Bank. During FY 1969, 94 new information analysis centers were added to the DDC Referral Data Bank. These include 6 newly designated DoD centers and 88 centers of other government agencies. These additions bring to 166 the total number of Scientific and Technical Information sources in the data bank which can be passed on to DDC users as an added service.

c. Contractor Performance Evaluation (CPE) and Contractor Cost Reduction (CCR) Data Banks. The CPE and CCR data banks are operated by DDC for the Assistant Secretary of Defense for Installations and Logistics. These two data banks provide DoD procurement agencies with quick and comprehensive evaluation of job performance by contractors. Both continued to grow during FY 1969. A total of 11,657 report copies, including both microfiche and

hard copy were furnished to satellite data banks and qualified requesters during the year.

d. Project THEMIS. This project title identifies DoD contractual efforts with centers of higher learning to develop new academic centers of excellence in research and technology. Information concerning work accomplished under these contracts is provided to DDC by DoD components and the Advanced Research Projects Agency, and is maintained as part of the Work Unit Data Bank.

e. Academic Science and Engineering. This involves a Government-wide system of reporting on federally supported research and engineering projects at academic institutions. The National Science Foundation (NSF) serves as the national focal point. DoD input is generated by DDC through the R&T Work Unit Information System. DDC obtained detailed data on each DoD contract and grant awarded to U. S. colleges and universities during FY 1969 and provided quarterly reports to the NSF.

V. CUSTOMER RELATIONS

During FY 1969 the Customer Relations Office conducted a comprehensive field liaison program. Field Liaison Representatives contacted 3,810 organizations. These were registered DDC users and organizations engaged in contract agreements with the government that were potential users of DDC products and services. During this field effort, over 14,000 individuals were contacted either by personal counseling or as attendees at briefings, course lectures, conferences, or seminars given by the DDC field staff.

Field Liaison Representatives presented 22 recurring lectures at such activities as the Air Force Institute of Technology, the Army Chemical Corps School, the Army Signal School, and the Army R&D Management Orientation Course.

From October 1968 through June 1969, DDC provided support for the National Engineering Information Conference which was held in June 1969 at the U. S. State Department Building under the sponsorship of the Office of Science and Technology of the Executive Office of the President. The Conference was the first of its kind, and attracted 300 participants from 22 foreign countries and a major cross-section of professional engineering societies, corporations, colleges, government organizations and trade associations in this country.

Articles describing DDC services received wide coverage in leading technical, management, and information oriented publications, and in the Congressional Record. In addition, DDC played host to visitors from Congress, DoD organizations, educational institutions, office of the President-elect, professional institutions, and other information disseminating activities. Visitors received briefings and tours of DDC facilities.

Requests from foreign sources for DDC services continued to be received at the rate of approximately 100 per month. Although DDC does not fill such requests, identification and directory service was provided when the request was from a friendly foreign country. To enable the scientific attaches of the local embassies to channel the requests through the appropriate release agencies, an orientation and liaison program was maintained with personnel from embassies of 40 countries.

VI. DEVELOPMENT

Development Plan

The Development Program Annex to DDC's Five-Year Operating Plan was submitted to HQ DSA along with that Plan in August 1968. Guidance received in April 1969 in response to the Development Plan called for emphasis on development of the on-line system, selective documentation services, primary document distribution, and an integrated RDT&E information system. DDC was requested to reflect this guidance in its Five-Year Operating Plan and Development Program Annex for FY 1970-74, to be submitted to HQ DSA in preliminary draft form by 1 June 1969 for review prior to submission of the final Plan and Annex on 15 August 1969.

Conversion to the UNIVAC 1108 Computer System

The basic activity affecting virtually all DDC production and development effort in FY 1969 was the conversion of ADP operations from the UNIVAC 1107 to the UNIVAC 1108 computer system. Primary equipment for the 1108 had been delivered to DDC on 24 June 1968, and remaining items and components for operation of the system were received during August and September. Installation of the 1108 was completed on 16 September, and initial operation under EXEC I was effected. A schedule was established for testing of the EXEC VIII operating system which would further expand processing and experimentation capabilities.

By the end of FY 1969, the solution of problems in the principal 1108 software system, the EXEC VIII program, was sufficiently close to completion to permit planning for acceptance testing. Despite delays, the increased processing capacity provided by the 1108 system was reflected in expanded DDC mission and service capabilities in such areas as the RDT&E Work Unit Data Bank (1498 Program), bibliographic search and retrieval, reduction in time for processing and filling requests for technical reports, improved DDC mission and announcement publications, and improved inventory and management control.

On-Line Experimentation

DSA Program Guidance issued in December 1968, called for attainment of operational status of the on-line retrieval capability during FY 1971. With the completion of acceptance testing of the UNIVAC 1108 hardware and UNIVAC's delivery of the first version of the 1108 operating system (EXEC VIII) in October 1968, DDC moved rapidly forward with development of its on-line system, converting its retrieval capability from the 1107 to the 1108. User manuals were prepared, and terminals were installed,

two within DDC and two external to DDC. Installation of cryptographic equipment needed to support operation of three additional external terminals was initiated, and DDC was established as a sub-account under the DSA Administrative Support Center's crypto-account for telecommunications security.

Early in the fourth quarter of FY 1969, the two terminals within DDC became operational, and in June 1969, communications between the DDC computer and terminals at the Air Force Systems Command and the Naval Ship Research and Development Center were established, making possible the first on-line use of the Work Unit Data Bank from external remote terminals. By the end of the fiscal year, target dates for operational status of the remaining three external terminals in the system test were as follows:

- a. Office of the Director of Defense Research and Engineering - August 1969.
- b. National Security Agency - August 1969.
- c. Army - October or November 1969.

Microfiche

In its efforts to increase its microfiche processing capabilities, DDC initiated several programs to refine its microfiche production and handling processes. A contract was awarded for development of a prototype automatic microfiche reproduction, storage, and retrieval system. A microfiche enlarger/printer capable of reproducing positive paper copy from either positive or negative microfiche was procured. HQ DSA approval was requested for a program to test and evaluate computer-onto-microform conversion equipment. For the benefit of small DoD field R&D installations, action was initiated to contract for a study to design and develop a relatively low cost microfiche storage and retrieval device. DDC is also cooperating with the Department of Health, Education, and Welfare in the design of a portable, low cost microfiche viewer.

In June 1969, in response to interest throughout the S&TI community and the desire of a number of DDC users, DDC was directed by ODDR&E to institute a service whereby users would have the option of receiving positive (black on a white background) or negative (white on black) microfiche. As of the year-end a project for implementation was being established.

Selective Documentation Services

DDC continued to test concepts of better techniques for announcement and distribution of technical reports by providing

the following services to selected users on an experimental basis:

a. Selective Announcement Services. Testing of the Group Announcement Bulletin, begun in FY 1968, continued through FY 1969, with a report of findings and recommendations scheduled for the end of August 1969.

b. Automatic Distribution of Documents in Microfiche Form. The initial experimental program was designed to make automatic distribution of reports which were being announced in the COSATI Fields/Groups contained in an established user profile. DDC determined this approach was not economically justifiable in view of the broad and general makeup of the Field/Group category codes. An effort was instituted to incorporate customized term profiles utilizing the total DDC automatic retrieval capability in meeting more specifically the requirements of participating users. Implementation of the revised program was effected in June 1969. DDC plans to continue the project evaluation phase and will complete a total program evaluation report in the first quarter of FY 1970. Plans have been submitted for approval which call for system expansion during the second quarter of FY 1970.

c. Coordinated Automatic Technical Report Dissemination. In an effort to reduce DoD costs for decentralized primary distribution, DDC, with the assistance of liaison representatives from each of the military services, formulated a plan for testing the consolidation of primary and secondary distributions of DoD technical reports. The project was initiated in August 1968 and is scheduled for completion at the end of FY 1970.

d. Magnetic Tape Distribution. Experimentation with distribution of document data on magnetic tape was continued. Tapes containing data from specified issues of the Technical Abstract Bulletin or from each issue were offered to qualified users. On request, these users were also furnished tapes of reproduced file data for specified Accessioned Document numbers or blocks of numbers. A system evaluation report and a user reference manual are scheduled for early FY 1970.

Language and Indexing Systems

In the interests of optimum utilization of the computer art and to keep information transfer and dissemination in step with the information and technology explosion, DDC increased its efforts to develop new language and indexing techniques in the following areas:

a. Contracting action was initiated for development of computer software that will enable the computer to convert sentence-structured inquiries from the user to Boolean logic with which it can work.

b. A prototype machine-aided indexing system was successfully tested, and effort was initiated to apply the system to the DDC indexing vocabulary.

c. The concept of an integrated language data base that will accept free language for both indexing and retrieval by means of synonym dictionaries and recognition grammars was advanced to an early test and creation stage.

d. As Assigned Responsible Agency for DoD technical terminology, DDC prepared a study of the interrelationships of various categorizing schemes such as those of COSATI, NASA, and the Bureau of the Budget. As of the year end a report to the DoD Comptroller was being drafted.

e. Projects were initiated and concepts developed in the areas of: Decentralized Search Formulation Capability; Tutorial Search Manuals and Programs; Stand-alone computer systems; and Automation of Duplicate Checking for AD documents.

Document and Information Systems

In addition to individually defined development projects, numerous revisions and enhancements were made to DDC's Document and Information Systems during FY 1969. Some of the more significant changes were: adoption of AUTODIN for user document requests; implementation of a computer-programmed management information inquiry capability for generating inventory and usage history data reports; implementation of an automated inventory file audit and control subsystem to ensure document accountability and to assist in monitoring the DDC internal document inventory workflow; and implementation of computer products to support development projects and assist in the interface of DDC's demand and automatic services programs.

VII. MANAGEMENT

Organization

The DDC organization implemented on 1 May 1968 remained unchanged until late in FY 1969.

In March 1969, the position of Special Assistant was abolished and that element of the Administrator's Personal Staff was eliminated.

The most significant change was made in the internal organization of the Directorate of Systems Development (DDC-D). This organization was initially aligned on a functional basis, but the alignment failed to permit adequate concentration of DDC development efforts on specific major development missions. An interim assignment of personnel within the framework of the project management concept was made in February 1969 for experimentation. Successful experience with this concept led to a DDC proposal to HQ DSA that the project management type organization for DDC-D be formally adopted. The proposal was approved on 2 June 1969, along with guidance that the Directorate name be changed to Directorate of Development to emphasize that the mission is not limited to development of systems.

Transfer of the DDC Security Officer and many of his functions on 1 July 1969 (described later under "Security") completed the elimination of the Administrator's Personal Staff.

All other elements of the 1 May 1968 organization remained unchanged throughout FY 1969 and continued into FY 1970.

Financial

As of the end of FY 1969, DDC had obligated a total of \$10,926,000 in the following Object Classes:

| | |
|---|--------------|
| Personal Services and Benefits..... | \$ 6,340,000 |
| Travel..... | 62,000 |
| Transportation of Things..... | 4,000 |
| Rentals, Communications..... | 1,190,000 |
| Printing..... | 287,000 |
| Other Services (including CFSTI support)... | 2,483,000 |
| Supplies..... | 469,000 |
| Equipment..... | 91,000 |
| Total | \$10,926,000 |

A FY 1969 goal of \$200,000 was established for DDC under the DoD Cost Reduction Program. Claims audited and approved by HQ DSA

totaled \$717,687 for the year. DDC participation in the DoD Zero Defects Program and the DSA Beneficial Suggestion Program also continued at a high level. Special emphasis on the Suggestion Program resulted in 77 adopted suggestions generating dollar savings in excess of \$65,000 for FY 1969. An Employee-of-the-Month Award was given each month to the individual DDC employee whose contribution to the improvement of DDC performance was judged most commendable.

Manpower and Performance

At the beginning of the report period, the DDC manpower authorization totaled 587 spaces. A net reduction of 2 spaces resulted in a year end authorization of 585, including 4 military officers and 6 positions under the Summer Employment of Disadvantaged Youth program.

As a part of the manpower management program, DDC established a Position Control and High-Grade Selection Review Panel in September 1968. The panel was redesignated as the Position Management Committee on 7 May 1969. This committee continually reviews the DDC grade structure and recommends action regarding the number and distribution of higher grade positions, the selection of professionally qualified personnel to occupy these positions, and the prevention of undue escalation in the average grade of DDC positions.

The expanded computer-based work measurement system which was in experimental stages at the close of FY 1968 was installed in early FY 1969. The system is designed to record and measure manpower costs for each DDC organizational element and functional work area. Computer output from the system can be tailored to provide comprehensive or selective data for management review and control of manpower costs.

Emergency Plans

A revised DDC Field Activity War and Emergency Support Plan was published in October 1968 to reflect changes in guidance and organizational structure. It streamlined instructions to be followed by DDC elements during war and other emergency conditions. The Plan was tested during the HIGH HEELS 68 exercise and in periodic exercises under the DSA War and Emergency Support Plan Exercise Program (WESPEX). Further refinements to the Plan were underway at the close of the year.

The DDC reconstitution files were continually updated, through a cyclic files rotation system, to provide current material for resuming DDC operations following any emergency interruption.

Security

During June 1969, DDC, HQ DSA, and the DSA Administrative Support Center (DSASC) completed actions for transfer of the information and personnel security functions of the DDC Security Officer to an Office of Security Support (OSS) to be activated in DSASC. This transfer was accomplished 1 July 1969 as part of a HQ DSA directed plan to consolidate and centralize security services common to all DSA activities at Cameron Station. Under the plan, the OSS will provide personnel and information security services to DDC to the same degree and extent as did the DDC Security Officer.

The DDC Security Officer and two other personnel were transferred with their positions to the OSS. Remaining personnel, principally the guard force, and functions related to physical security, visitor control, and Provost Marshal matters were transferred to the DDC Office of Installation Services.

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None

12. SPONSORING MILITARY ACTIVITY

N/A

13. ABSTRACT

The summary describes the more significant activities and achievements of the Defense Documentation Center during FY 1969, including:

DDC and the Scientific and Technical Community. The DDC role in the DoD S&TI Program continued to shift from the traditional concept of an archival repository and a library-oriented operation to the development and execution of computer-based information systems. The mix of services offered S&TI users continued to expand from the furnishing of hard copy documents to a full range of products tailored to the users' needs.

Development Mission. Increased emphasis was placed on the DDC development mission and related programs. The basic objective of the program is to provide major advances in terms of new and significantly improved S&TI products and services, and the identification and removal of barriers to S&TI transfer. Development plans include efforts to identify and develop S&TI products, services, and systems for future as well as present needs.

Conversion to the UNIVAC 1108 Computer System. DDC production and development effort was affected by conversion from the UNIVAC 1107 to the UNIVAC 1108 computer system. Increased processing capacity of the 1108 system was reflected in expanded DDC mission and service capabilities in most areas.

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| *Technical Information Centers | | | | | | |
| *Information Retrieval | | | | | | |
| Department of Defense | | | | | | |
| History | | | | | | |
| Data Processing Systems | | | | | | |
| Digital Computers | | | | | | |
| Bibliographies | | | | | | |
| Reports | | | | | | |
| Armed Forces Research | | | | | | |
| *Defense Documentation Center | | | | | | |
| Scientific and Technical Information | | | | | | |
| UNIVAC 11/8 Computers | | | | | | |

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